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(54) Title: SYSTEM AND METHOD FOR FACE RECOGNITION

(57) Abstract: A face recognition system is provided with a component learning/extraction module, a component classifier training module, a knowledge base for component classification, a component extraction module, an object identification training module, a knowledge base for face identification and an object identification module. The component learning/extraction module receives image data of faces of individuals at various viewpoints and extracts component data at various viewpoints from the image data of faces of individuals at various viewpoints. The component classifier training module receives the component data at various viewpoints and produces results of classifier training of the component data at various viewpoints. The knowledge base for component classification stores the results of classifier training of the component data at various viewpoints. The component extraction module receives image data of faces of individuals at various viewpoints and extracts outputs of classification of the component data at various viewpoints, using the results of classifier training of the component data at various viewpoints, stored in the knowledge base for component classification. The object identification training module receives the outputs of classification of the component data at various viewpoints and determines indicator component for each of the individuals by Bayesian estimation in such a way that posterior probability of a predetermined attention class is maximized under the outputs of classification of the component data at various viewpoints. The knowledge base for face identification stores indicator components for the individuals. The object identification module receives the outputs of classification of the component data at various viewpoints and identifies faces of the individuals using the indicator components for the individuals stored in the knowledge base for face identification.

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